WHAT IS CLAIMED IS:

1. An image processing method for compensating for light falloff in a digital image, said method comprising the steps of:

providing an input digital image comprised of image pixels;

providing individual compensation values to correct light falloff in one or more of the image pixels, whereby the individual compensation values induce a balance change in the digital image;

determining a balance value for correcting the balance change of the digital image; and

applying the individual compensation values and the balance value to said one or more pixels of the input digital image to provide a corrected image having compensation for light falloff with minimal change to the light balance.

2. The method as claimed in claim 1 wherein the step of providing individual compensation values comprises the steps of:

providing falloff compensation information which varies depending on location within the digital image; and

using the falloff compensation information to generate individual compensation values for said one or more pixels.

3. The method as claimed in claim 1 wherein the step of providing individual compensation values comprises the steps of:

providing a falloff compensation mask which varies depending on location within the digital image; and

using the falloff compensation mask to generate individual compensation values for said one or more pixels.

4. The method as claimed in claim 2 wherein the step of determining a balance value uses the falloff compensation information to determine a balance value.

5. The method as claimed in claim 3 wherein the step of determining a balance value uses the falloff compensation mask to determine a balance value.

6. The method as claimed in claim 1 wherein the step of determining a balance value comprises the steps of applying the individual compensation values to said one or more pixels of the input digital image to provide an intermediate corrected image and computing the balance value from the difference of the mean intensity of the central portions of the input digital image and the corrected digital image.

7. An image processing method for compensating for light falloff in a digital image, said method comprising the steps of:

providing a digital image comprised of image pixels;

providing falloff compensation information which varies depending on location within the digital image;

using the falloff compensation information to generate an individual compensation value for one or more of the image pixels;

determining a balance value from the falloff compensation information; and

applying the individual compensation value and the balance value to said one or more pixels of the digital image to provide a corrected image having compensation for light falloff with minimal change to the light balance.

8. A method as claimed in claim 7 wherein the step of applying the individual compensation value to said pixels is additive.

9. A method as claimed in claim 7 wherein the step of applying the individual compensation value to at least one pixel value is multiplicative.

10. A method as claimed in claim 7 wherein the step of determining a balance value from the falloff compensation information is accomplished by determining the average of at least two individual compensation values.

11. The method as claimed in claim 10 wherein the said at least two individual compensation values correspond to adjacent and centrally located locations within the digital image.

12. The method as claimed in claim 11 wherein the balance value is determined by using an average of between 25% to 45% of the individual compensation values.

13. An image processing method for compensating light falloff in a digital image, said method comprising the steps of:

providing a digital image comprised of image pixels;

providing a falloff compensation function;

providing a parameter value related to the falloff compensation function that refers to the relative amount of correction applied to the image pixels;

using the falloff compensation function and the parameter value to generate individual compensation values for one or more of the image pixels;

determining a balance value from the falloff compensation function and the parameter value; and

applying the individual compensation values and the balance value to said one or more image pixels of the digital image.

14. An image processing method for compensating for light falloff in a digital image, said method comprising the steps of:

providing a digital image comprised of image pixels;

providing a falloff compensation mask;

using the falloff compensation mask to generate an individual compensation value for one or more of the image pixels;

determining a balance value from the falloff compensation mask; and

applying the individual compensation value and the balance value to said one or more image pixels of the digital image.

15. A computer program product for compensating for light falloff in an input digital image comprised of image pixels, said computer program product comprising: a computer readable storage medium having a computer program stored thereon for performing the steps of:

providing individual compensation values to correct light falloff in one or more of the image pixels, whereby the individual compensation values induce a balance change in the input digital image;

determining a balance value for correcting the balance change of the input digital image; and

applying the individual compensation values and the balance value to said one or more pixels of the input digital image to provide a corrected image having compensation for light falloff with minimal change to the light balance.

16. The computer program product as claimed in claim 15 wherein the step of providing individual compensation values comprises the steps of:

providing falloff compensation information which varies depending on location within the digital image; and

using the falloff compensation information to generate individual compensation values for said one or more pixels.

17. The computer program product as claimed in claim 15 wherein the step of providing individual compensation values comprises the steps of:

providing a falloff compensation mask which varies depending on location within the digital image; and

using the falloff compensation mask to generate individual compensation values for said one or more pixels.

18. The computer program product as claimed in claim 16 wherein the step of determining a balance value uses the falloff compensation information to determine a balance value.